

In the Claims

This listing of claims will replace all prior listings of claims presented in this application.

Listing of Claims:

1. (currently amended) A non-inertial release restraint buckle assembly for a vehicle having a restraining belt, the buckle assembly comprising; a buckle including a frame and a housing at least partially covering said frame, said housing having a front and rear ends and opposite sides, a latch plate receiving channel defined within said housing, an opening in said front end of said housing communicating with said latch plate receiving channel and of a size to receive a latch plate therein, a latch plate having a pair of spaced locking tongs including hooked end portions, a pair of latching mechanisms slidable mounted within said housing so as to be reciprocally movable in a guide channel defined within said housing and which extends transversely to a central longitudinal axis of said housing which extends from said front to said rear ends, biasing means disposed between said pair of latching mechanisms for urging said latching mechanisms in opposite directions toward first outer locking

positions wherein said latching mechanisms are engageable with said locking tongs of said latch plate when said latch plate is inserted in said housing, release means engageable with said latching mechanisms for moving said latching mechanisms simultaneously inwardly towards said central axis of said housing to second release positions wherein said latching mechanisms are disengaged from said locking tongs of said latch plate so that said latch plate may be removed from said buckle housing, and said biasing means constantly urging said latching mechanisms toward said first locking positions with oppositely directed forces such that when one of said latching mechanisms is urged toward said second release position by a force, a simultaneous and substantial equal increase in force is applied by said biasing means to retain the other latching mechanism in said first locking position thereof such that said latching mechanisms are only releaseable upon simultaneous application of forces to move said latching mechanisms from said first locking positions to said second release positions.

2. (currently amended) The non-inertial release restraint buckle assembly of claim 1 including a pair of spaced openings in said housing, a push button ~~secured to~~ extending from each of

said latching mechanisms and extending ~~upwardly~~ through opposite ones of said openings in said housing such that said push buttons are in spaced relationship with respect to one another whereby said push buttons may be urged toward one another to simultaneously urge said latching mechanisms to said second release positions.

3. (original) The non-inertial release restraint buckle assembly of claim 2 wherein said housing extends generally slightly above said push buttons in an area of said spaced openings therein.

4. (currently amended) The non-inertial release restraint buckle assembly of claim [[2]] 1 wherein each of said latching mechanisms includes a slide block including an outer tapered face which is engageable by one of said locking tongs when said latching mechanism is in said first locking position, said tapered face terminating at a lock dog for engaging said hooked end portion of one of said locking tongs of said latch plate.

5. (original) The non-inertial release restraint buckle assembly of claim 4 including a pair of spaced guide blocks

mounted in said housing and defining said guide channel therebetween, and each of said slide blocks including means for engaging said guide blocks to prevent said slide blocks from being disengaged from within said guide channel.

6. (original) The non-inertial release restraint buckle assembly of claim 5 wherein said buckle frame includes a pair of opposing sidewalls defining opposing channels for receiving said locking tongs therein when said latch plate is inserted within said opening in said housing.

7. (previously presented) The non-inertial release restraint buckle assembly of claim 1 in which said release means for simultaneously moving said latching mechanisms to said second release position includes a slide release member including a pair of spaced projections extending into said housing so as to be selectively engageable with said latching mechanisms, and said slide release member including a push button portion selectively manually engageable to urge said slide release member from a first position to a second position in which said spaced projections urge said latching mechanisms simultaneously to said second release positions.

8. (original) The non-inertial release restraint buckle assembly of claim 7 in which said housing includes a domed portion for selectively receiving said push button when said push button is urged to move said slide release member to said second position.

9. (currently amended) The non-inertial release restraint buckle assembly of claim 7 wherein said latch plate includes an intermediate tang disposed between said locking tongs, said tang being normally spaced in non-engaging relationship from said latching mechanisms when said latching mechanisms are in said first outer locking positions thereof wherein said latching mechanisms engage said locking tongs of said latch plate but being moveable intermediate said latching mechanisms to prevent said latching mechanisms from moving to said second release positions thereof if an inertial force is applied to said slide release member and said latching plate to drive them inwardly of said housing.

10. (previously presented) The non-inertial release restraint buckle assembly of claim 9 in which said buckle frame includes a pair of opposing side walls defining opposing guide

channels for said slide release member, and means for retaining said slide release member in sliding relationship within said opposing guide channels.

11. (currently amended) The non-inertial release restraint buckle assembly of claim [[10]] 9 wherein each of said latching mechanisms includes a slide block including an outer tapered face which is engageable by one of said locking tongs when said latching mechanism is in said first locking position, said tapered face terminating at a lock dog for engaging said hooked end portion of one of said locking tongs of said latch plate.

12. (original) The non-inertial release restraint buckle assembly of claim 11 including a pair of spaced guide members mounted in said housing and defining said guide channel therebetween, and each of said slide blocks including means for engaging said guide members to prevent said slide blocks from being disengaged from within said guide channel.

13. (currently amended) The non-inertial release restraint buckle assembly of claim [[12]] 9 including a first resilient means mounted between one of said guide members and said slide

release member for normally urging said slide release member to its first position.

14. (previously presented) The non-inertial release restraint buckle assembly of claim 13 including second resilient means for urging said latch plate from said buckle housing when said latching mechanisms are moved to said second release positions.

15. (currently amended) The non-inertial release restraint buckle assembly of claim 12 wherein ~~said latch plate~~ ~~tongs includes an intermediate tang disposed between said locking~~ ~~tongs,~~ one of said guide members ~~having~~ has a slot defined therein for selectively receiving said intermediate tang when said latch plate is inserted within said housing, said slot in said one of said guide members being positioned such that said tang is moveable intermediate said latching mechanisms to prevent said latching mechanisms from moving to said second release positions if an inertial force is applied to said slide release member and said latch plate to drive them inwardly of said housing.

16. (currently amended) A method of providing a non-inertial safety restraint system for vehicles which system includes a latch plate having a pair of spaced locking tongs, a buckle including a housing having an interior channel for selectively receiving the latch plate and a pair of oppositely oriented and reciprocating latching mechanisms movable within the housing from first locking positions engaging the locking tongs of the latch plate to retain the latch plate within the housing to second positions to permit insertion and removal of the latch plate relative to the interior channel of the housing, and wherein at least one release member is provided for simultaneously moving the latching mechanisms to the second release positions, the method including;

a) continuously urging the pair of latching mechanisms toward the first locking position thereof by generally equal and opposite resilient force, such that application of an inertial force to the buckle which causes one of the pair of latching mechanisms to be urged to the second release position thereof results in an equal and opposite force being applied to retain the other of the pair of latching mechanisms in the first locking position thereof thereby preventing accidental release of the latch plate from the buckle housing.



b) moving the pair of latching mechanisms from the first locking positions thereof to the second release positions thereof as the latch plate is being inserted within the housing and such that when the latch plate is fully inserted within the housing the pair of latching mechanisms are moved to the first locking positions thereof to prevent withdrawal of the latch plate from the buckle housing, and

c) releasing the latch plate from the pair of latching mechanisms only upon an application of manual force to ~~the at least one release member to~~ simultaneously urge the latching mechanisms to move toward one another within the housing to thereby move them to the second release positions thereof.

17. (previously presented) The method of claim 16 wherein the step of releasing includes manually urging two oppositely oriented push buttons which are connected to the pair of latching mechanisms toward one another to thereby move the pair of latching mechanisms to the second release ~~position~~ positions.

18. (cancelled)

19. (previously presented) The method of claim 16 including

normally retaining the at least one release member in spaced non-contacting relationship from the pair of latching mechanisms.

20. (currently amended) The method of claim 19 including mechanically blocking the pair of latching mechanisms from moving to the second release positions thereof in the event a non-manual force is applied to urge the at least one release member toward the pair of latching mechanisms when the latching mechanisms are in their first locking positions to thereby prevent accidental release of the latch plate.